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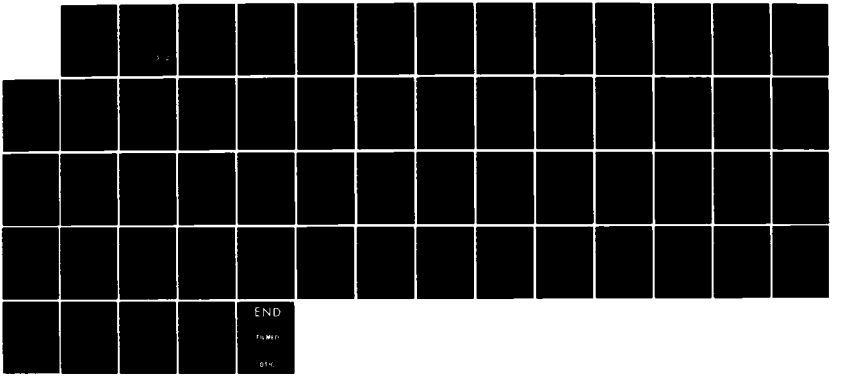

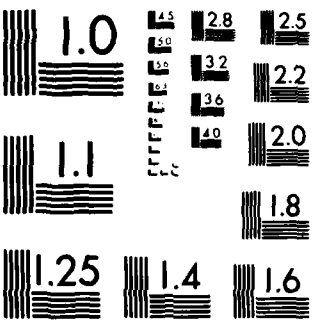

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THE RESERVE FORCES IN AN ALL VOLUNTEER ENVIRONMENT

John R. Brinkerhoff
David W. Grissmer

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The Rand Corporation
Santa Monica, California 90406

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John R. Brinkerhoff
Historical Evaluation and Research Organization
Dunn Loring, Virginia

David W. Grissmer
The Rand Corporation, Washington, D.C.

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THE RESERVE COMPONENTS IN THE ALL VOLUNTEER ENVIRONMENT

The Gates Commission staff was faced with a nearly impossible job in estimating the size of volunteer reserve forces sustainable under different levels of pay. This was due largely to the highly artificial manning environment for reserve forces created by both the Vietnam war and the draft. Another complicating factor was the highly decentralized personnel management system that could produce only sketchy estimates of key parameters like losses, reenlistments and accessions. It was further complicated by absence of research on effects of pay increases on reserve enlistment and retention and more generally by a lack of understanding of the moonlighting labor market--which economists had yet to address in a systematic way--and the sociology of voluntary service organizations.

Nonetheless, the Commission stated that Selected Reserve forces of between 900.000 and 1,000,000 volunteers--strength levels which matched those in the 1960s--could be sustained with their recommended pay levels. Today, Selected Reserve strength is 982.000 with the potential in the absence of strength caps imposed in FY83 to grow even further. The fact that today's strength levels and Gates Commission predictions are similar hides both a precipitous decline in strength between FY72 and FY78 to 788,000, and a fortuitous combination of large, but compensating errors in predictions made in the analysis of reserve volunteer accession, attrition and retention levels by the Commission.

The Commission was mute on the subject of the Individual Ready Reserve (IRR)--a pool of pretrained manpower used to provide fillers

during mobilization. This pool which consisted primarily of active force veterans with remaining time on their six year service obligation declined sharply with the end of the draft. The ongoing rebuilding of this important mobilization resource has meant utilizing other sources of trained personnel, possible extension of the six year service obligation as well as testing of retainer type pay.

This paper will review in separate sections the Selected Reserve and Pretrained Individual Manpower. The first section will review the AVF experience for the Selected Reserves in the light of projections made by the Gates Commissions and present future strength projections. Given today's high strength levels, it will then speculate on an important demand side question--namely the relative costs of active and reserve units. The second section reviews the strength trends for Pretrained Individual Manpower--and reviews the policy actions and future trends for this part of the Ready Reserve.

CHARACTERISTICS OF THE SELECTED RESERVE IN THE ALL VOLUNTEER ENVIRONMENT

Following a somewhat perilous transition period[1] (1972-1978), the strength of the All Volunteer Selected Reserve today stands at levels comparable to that of the draft years between 1960 and 1972 (see Table 1). The quality and demographic composition of Selected Reserve personnel is roughly comparable to personnel in the Active Force (see Table 2), and, like the active force, today's reserve volunteers

[1] There is a common misperception as to when both active and reserve forces can be considered to be "all volunteer." The transition period to an all volunteer equilibrium force occurs only when the first volunteer cohorts in FY73 reach retirement--a 30 year process. Thus, in one sense it is too early to evaluate the AVF. Practically speaking, the major effects of having volunteer cohorts--higher retention rates at first term--are felt in the first 10-12 years as the number of midcareerists swells and accession requirements decline. The effects of these phenomena are still taking place in the active and reserve.

Table 1

SELECTED RESERVE STRENGTH (1960-1983)

Period	Years	Annual Fiscal Year End Strength (000) DoD	Army Components
Pre Vietnam	1960-1964	948 (average)	NA
Vietnam	1965-1969	953 (average)	NA
Declining Draft Calls	1970	987	670
	1971	978	665
	1972	925	623
AVF Years With Low Retention	1973	919	621
	1974	925	638
	1975	897	620
	1976	823	557
	1977	808	544
	1978	788	527
AVF Years With High Retention	1979	807	536
	1980	850	573
	1981	898	614
	1982[a]	963[a]	665[a]
	1983[a]	982[a]	670[a]

[a]Strength caps imposed.

entering the Force differ from their draft-motivated counterparts in having a lower educational achievement and mental category level, and having a higher percentage minority and women (see Table 3). However,

Table 2

COMPARISON OF ACTIVE AND SELECTED RESERVE PERSONNEL (FY82)

	DoD (Enlisted)		Army (Enlisted)	
	Active	Reserve	Active	Reserve
Education				
High school graduate	91.6	86.5	88.4	84.1
Nonhigh school graduate	8.4	13.5	11.6	15.9
Mental Category				
Cat I-II	35.3	38.2[a]	25.1	35.0[a]
Cat III	45.5	51.7[a]	44.0	55.3[a]
Cat IV-V	19.1	10.2[a]	30.9	9.7[a]
Minority Participation				
Black	22.0	18.5	32.7	21.2
Nonblack	78.0	81.5	67.3	79.8
Female Participation				
Female	9.1	9.7	9.6	9.8
Male	90.9	90.3	90.4	90.2
Age				
Average age	NA	29.6	NA	28.8

[a]Reserve AFQT data are not yet renormed for the years 1976-1979. The effect of renorming will be to shift more people into lower mental categories and narrow considerably the differences between Active and Reserve mental category distributions.

the average reservist has more years of combined active and reserve experience[2] (see Table 4) since volunteers have brought lower overall

[2] This point is harder to document since distribution of reservists by year of service is not available for draft years. However, the distribution for FY76 and FY77 in Table 4 reflects draft level turnover somewhat since there was still a significant percentage of draft motivated youth in the force who had entered before the draft ended in FY72.

Table 3

COMPARISON OF CHARACTERISTICS OF NON-PRIOR SERVICE SELECTED RESERVE ACCESSIONS FY71-FY82

	DoD	
	FY71	FY82
Education		
Some college and college graduates	52.3	4.2
High school graduates--no college	39.9	72.7
Nonhigh school	7.8	24.1
Mental Category		
I	17.3	3.0
II	41.0	23.2
III	34.8	59.9
IV	6.9	13.5
Sex		
Male	99.5	82.5
Female	.5	17.5
Race		
Black	1.7	9.7
Nonblack	98.3	90.3

turnover levels (Table 5) and a more efficient balance of more prior service and less non-prior service manpower utilization[3] (see Table 6). Moreover, the recent strength trends of the last four years which saw reserve strength grow at a compound annual growth rate of 5 percent

[3] As long as the draft was supplying the reserves with almost unlimited non-prior service accessions of high quality, there was little incentive to utilize larger numbers of already trained prior service personnel. The heavy use of non-prior service personnel is shown in Table 6 for FY70 and FY71.

Table 4

YEARS OF COMBINED ACTIVE AND RESERVE SERVICE
OF SELECTED RESERVE ENLISTED PERSONNEL

Fiscal Year	Percentage		
	Under 6	6-10	10+
1976	51.4	31.3	11.3
1977	45.3	34.3	20.4
1978	41.6	35.2	24.2
1979	44.2	30.8	25.0
1980	45.6	27.4	27.1
1981	46.3	25.5	28.1
1982	45.8	25.1	29.1

Table 5

LOSSES TO THE ENLISTED SELECTED RESERVES

Fiscal Year	DoD (000)	% of End Strength	Army (000)	% of End Strength
76	244	34.5	196	40.2
77	230	33.1	168	35.4
78	219	32.5	161	35.2
79	193	27.9	135	29.1
80	183	25.0	120	24.1
81	193	23.6	122	22.7
82	192	23.2	131	22.7

Table 6

ACCESSIONS TO THE SELECTED RESERVES

Fiscal Year	DoD NPS	DoD PS	DoD Total	DoD % PS	Army NPS	Army PS	Army Total	Army % PS
70	179	84	263	31.9	149	28	176	15.9
71	103	114	216	52.5	83	21	104	20.2
72	95	150	245	61.1	62	54	117	46.2
73	70	118	189	62.8	37	68	105	64.8
74	46	180	226	79.6	36	115	152	75.7
75	70	150	219	68.3	52	98	149	65.8
76	74	146	220	66.2	57	100	157	63.7
77	73	153	225	67.8	56	101	157	64.3
78	70	131	201	65.1	53	88	142	62.0
79	78	126	205	61.7	64	75	139	54.0
80	94	128	222	57.8	76	80	157	51.0
81	104	126	230	55.0	84	80	164	48.8
82	106	138	244	56.6	86	84	171	49.1

could--in the absence of strength caps imposed in FY83--continue at a slightly lower rate of growth for the next few years without major changes in policy. Thus Selected Reserve manpower policy questions can turn from a preoccupation with supply side questions to exploring demand side questions. Chief among these questions is the proper tradeoff between the size of the reserve and active force when both cost and capability criteria are evaluated.

Review of Gates Commission Analysis and Recommendations for Reserve Forces

The Gates Commission and others studying the all volunteer force realize that reserve forces would take on an enhanced importance in an

all volunteer environment due to the smaller planned size of the active force[4] and the diminished capability without an operating draft to rapidly expand the active force during mobilization. This role was recognized--at least on paper--as part of the total force policy enunciated in 1971. Evidence was available at the time of the Gates Commission to indicate that the Reserve forces would probably be the weak link in the total force strategy in an all volunteer environment. To the credit of the Gates Commission analysts, much of this evidence was recognized.

The Commission recognized a major problem in the reserve's heavy dependence on draft-motivated youth. Survey estimates made in 1968[5] showed that 75 percent of first-term reserve enlistees were draft-motivated, and, in fact, queues of individuals waited to enter the reserve rather than be drafted into the active force. These potential enlistees would disappear along with the draft. The Commission saw a second problem in the scarcity of research on the responsiveness of reservists to pay increases and in the poor quality of the data to support force sizing estimates. This research gap seemed critical since increased pay was the principal means in an AVF of controlling force size and quality, and addressing specific skill shortages. The Gates Commission's confidence in maintaining an active force of 2 million to 2.5 million by raising entry pay levels somewhat above the minimum wage and maintaining the career force pay at inflation-adjusted levels[6] flowed directly from studies showing that enlisting youth responded to

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[4] The current active force of 2.1 million members is the smallest since 1949.

[5] The Report of the President's Commission on an All-Volunteer Force, Chapter 9, "Reserve," Washington, D.C.: U.S. Government Printing Office, 1970.

[6] The Report of the President's Commission on an All-Volunteer Force, Washington, D.C.: U.S. Government Printing Office, 1970.

increases in military wages and that reenlistees responded to an even greater extent. The active force elasticities[7] were estimated at 1.25 for enlistment and 2.8 for reenlistment.[8]

Similar estimates were needed for sound "reserve" transition planning to the AVF. However, unlike the active force, elasticities for reserve forces were not available from previous research. Not only were elasticities not available but critical historical data on accessions, losses and reenlistments were often sketchy. Perhaps more importantly from a planning viewpoint was that any manpower data collected would reflect the highly artificial reserve "recruiting" environment produced by the Vietnam war and draft. The war brought large numbers of reserve non-prior service enlistments of high aptitude and educational achievement for whom reserve service was essentially a deferment from active duty service and probable Vietnam duty.[9] The war also brought larger active service sizes which created a large veteran pool from which reserve could easily draw prior service accessions. The queues of high quality NPS accessions probably crowded out both prior service accessions and lower quality volunteer NPS accessions. Thus, enlistment data for both prior service and volunteer NPS accessions even if

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[7] An elasticity is the ratio of the percentage increase in enlistments to the percentage increase in compensation. An elasticity of 1.25 indicates that a pay rise of 10 percent would increase enlistments by 12.5 percent.

[8] Alan E. Fechter, "Army Enlistments," and Gary R. Nelson, "Army Reenlistment," in Studies Prepared for the President's Commission on an All-Volunteer Armed Force, Washington, D.C.: U.S. Government Printing Office, November, 1970.

[9] Even though educational level and aptitude were high, the military effectiveness of units filled with personnel who enlisted to avoid active military service and Vietnam duty might be questioned.

available are probably demand constrained and of marginal use for planning.

The simultaneous ending of the draft and the war meant recruiting in a moonlighting labor market characterized by low participation rates (only 6-7 percent of male working Americans hold two jobs).[10] There was also great uncertainty in this market of the extent to which monetary incentives--the core strategy for the active force AVF--would work for reserves. In the absence of empirical estimates, Commission staff made several assumptions concerning reserve pay elasticities for both enlistment and reenlistment. They assume that responsiveness to pay increases at enlistment would be somewhat smaller in the reserve than in the active force because of differences in the primary and secondary labor market. They estimated an enlistment elasticity with an upper bound of 1.25 (the active force enlistment elasticity) and a lower bound of 0.8.

On the basis of a 1968 survey of reserve personnel, the Commission calculated the following reenlistment pay elasticities: for draft-motivated first-term members with 4 to 6 years of service, 2.0; volunteer first-term members with 4 to 6 years of service, 0.8; and members with 6 to 10 years of service, 0.3. These reenlistment elasticities were much lower than those estimated for the active force. The Commission also found from the 1968 survey that, as might be expected, draft-motivated youth reenlisted at much lower rates than nondraft-motivated enlistees and higher retention would occur even without pay increase.

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[10] Selected Reservists are primarily moonlighters. Over 90 percent hold a primary job in addition to their reserve job. Multiple job holding rates have been fairly constant over the period 1956-1971 (see Multiple Jobholding in 1970 and 1971, Special Labor Force Report 139. Washington, D.C.: U.S. Department of Labor, 1972).

Anticipating a more favorable reenlistment rate in the AVF and the adoption of its recommended pay increase,[11] the Gates Commission predicted that a Selected Reserve force of between 900,000 and 1 million officers and enlisted personnel could be maintained. It also warned, however, that its estimates were inadequately based:

> Analysis of the Reserve problem, however, suffers seriously from a lack of data. Even though special care was taken to provide against error of estimation, the assessments of what is required to maintain an All-Volunteer Force are much more tenuous than for the active force. . . . Given the uncertainty which surrounds projections of Reserve enlistments and losses, further steps beyond the recommended pay increase may be necessary. Any further steps should await the results of experience with higher pay during the first few years.

Selected Reserve Experience in the AVF

Selected Reserve strength which stood at 987,000 in 1970 dropped to 788,000 by 1978--and then rose to 982,000 by FY83 (see Table 7). Understanding this dramatic reversal is critical to both assessing Gates Commission predictions and projecting future strength trends. There are four major points that are useful to consider at the outset when understanding the manning of Selected Reserve Units in the AVF:

1. The experience was markedly different by component.

2. A strength decline followed by a renewal was implicit in the Gates Commission analysis and should have been expected.

3. The sociology of reserve units and economics of reserve supply is significantly different from that of active units and active supply, so financial incentives tend to obtain somewhat different results.

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[11] The Commission did not actually recommend separate reserve compensation initiatives. Rather, reserve pay increases followed from their recommended pay increases for the active force because reserve and active pay levels are linked. Raises in active duty base pay result in equal percentage increases in reserve pay.

Table 7

SELECTED RESERVE STRENGTH BY COMPONENT,[a] FY 1970-FY 1982
(In thousands)

Fiscal Year	Army Natl Guard	Army Reserve	Naval Reserve	Marine Corps Reserve	Air Natl Guard	Air Force Reserve	Armed Forces Total
1970	409	261	128	49	90	50	987
1971	402	263	130	47	86	50	978
1972	388	235	124	41	89	48	925
1973	386	235	126	38	90	44	919
1974	403	235	115	31	94	46	925
1975	395	225	98	32	95	51	896
1976	362	195	97	30	91	48	823
1977	355	189	90	31	92	50	808
1978	341	186	83	33	92	54	788
1979	346	190	88	33	93	54	807
1980	367	206	87	35	96	59	850
1981	389	225	88	37	98	62	898
1982	408	257	94	40	101	64	963
1983	415[b]	256[b]	102[b]	44[b]	102[b]	64[b]	982[b]

SOURCE: Official Guard and Reserve Manpower Strengths and Statistics, September 30, 1982.

[a]Excludes Coast Guard reserve data.

[b]March, 1983.

4. Application of management attention, targeted financial incentives, recruiting resources, and command emphasis to reserve problems lagged by several years similar application to active force problems.

The Air National Guard and the Air Force Reserve have gained strength during the AVF years increasing from 89,000 and 49,000 in FY72 to 101,000 and 69,000 in FY82. This was not surprising since these components rely mainly on prior service personnel--not on draft motivated non-prior service personnel. The pool of prior service personnel had been swelled by the Vietnam War, and any transition problems associated with non-prior service personnel seemed to have been anticipated by AVF reserve planning unique to the Air Force.[12] The increase in force size in the air components seems largely determined by demand and only the threat of a declining veteran pool clouds the future.

The Navy Reserve was similarly mainly manned by prior service personnel and end strength seems determined by demand rather than supply. The large decline from 128,000 to 83,000 from FY70 to FY78 resulted from policy guidance by OSD on Naval Reserve manpower

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[12] The Air Force initiated a series of studies of reserve personnel in the early 1970s which developed the theory of the moonlighting labor market and developed estimates of volunteer accessions. See: Bernard Rostker, Air Reserve Forces Personnel Study: Volume 1. The Personnel Structure and Posture of the Air National Guard and Air Force Reserve, R-1049-PR, The Rand Corporation, April 1973; Bernard Rostker and Robert Shishko, Air Reserve Personnel Study: Volume II. The Air Reserve Forces and the Economics of Secondary Labor Market Participation, R-1254-PR, The Rand Corporation, August 1973; and Bernard Rostker, Air Reserve Personnel Study: Volume III. Total Force Planning, Personnel Costs, and the Supply of New Reservists, R-1430-PR, The Rand Corporation, October 1974.

requirements rather than supply constraints resulting from an AVF environment. Congressional reversal of Naval requirement trends since 1978 has resulted in increases and Naval Reserve strength has risen from 83,000 to 104,000 in FY83. Again, the relatively small size of the Naval Reserve relative to the active Navy and their dependence on prior service personnel make strength except for certain skills primarily demand driven.

The decline in the Army and Marine components between FY70 and FY78 seemed to be attributable to the end of the draft. Like the active Army, these components depended heavily on junior-level, draft-motivated personnel. Between 1970 and 1978, the Army National Guard had fallen in strength from 409,000 to 341,000, the Army Reserve from 261,000 to 186,000 and the Marine Corps Reserve from 49,000 to 31,000. While some attribute the Marine Reserve decline to demand and budget conditions similar in nature to the Naval Reserve, the decline in the Army components undoubtedly stems from supply conditions.

The decline in Army component reserve strength during the early years of the AVF raised questions about the original Gates Commission assumptions. Since the assumed pay elasticities were based neither on behavioral data nor on a well-developed theory of reserve participation, it was natural to question their validity. Actual elasticities might be much lower than assumed, resulting in lower levels of accessions and reenlistments. Also, the expected increase in reenlistment rates associated with volunteers might be smaller than expected or estimates of basic parameters such as base level volunteer accessions, retention rates or losses might have been in error. We will now look at accession, attrition and retention experiences in the Reserve and compare to the Gates Commission analysis.

RESERVE RETENTION

The Gates Commission estimates of first term reserve retention were less than one-half of actual realized rates (see Table 8). The low estimate was primarily due to inaccurate estimates of base retention rates for volunteers from survey data collected in 1968. Survey questions attempted to distinguish between volunteers and those draft motivated, and then probed reenlistment intention. A likely explanation for the large discrepancies is that many individuals answering the surveys misclassified themselves as entering the reserves as volunteers rather than as being draft motivated. This would tend to bias the reenlistment rate downward. A second reason for misestimation was that pay elasticities at first term turned out to be wildly optimistic. However, since service pay raises were relatively small for careerists, this difference is of little consequence. Whereas the Gates Commission had assumed elasticities of 2.0 for draft-motivated first termers, .8 for non-draft motivated first termers and .3 for careerists with 6-10 years of service, the results of an econometric model estimated with data collected during a reserve reenlistment experiment in 1978[13] imply an elasticity of .2[14] for a group nearly equally divided among

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[13] John White, Assistant Secretary of Defense (MRAL) requested funds from Congress in FY77 to test several reserve pay and benefit initiatives. The first reserve pay incentive authorized by Congress was a reenlistment bonus. This test provided the opportunity to test several hypotheses underlying the Gates Commission analysis of Reserve retention rates.

[14] Burke K. Burright, David W. Grissmer, and Zahava D. Doering, A Model of Reenlistment Decisions of Army National Guardsmen, R-2866-MRAL. The Rand Corporation, October 1982.

Table 8

COMPARISON OF GATES COMMISSION RETENTION PARAMETERS WITH SUBSEQUENT EXPERIENCE

	Gates	Experience
Continuation rate at sixth year--draft motivated enlistee	6	21[b]
Continuation rate at sixth year--volunteer	22[a]	49[b]
Continuation rate at eighth year	50-58[c]	57[b]

	Pay Elasticity	
	Gates	Experience
First term--draft motivated	2.0	.2[d]
First term--volunteer	.8	
Careerist--6-10 YOS	.3	

[a]Base reenlistment rate estimated from survey data for those declaring they were volunteers with an assumed 6 percent pay increase and elasticity of .9.

[b]Estimated from individual level data collected from Army reservists and National Guardsmen making first term decisions at six years in FY78 (see [15]).

[c]Base rate estimated from survey data for those declaring they were volunteers with an assumed 5 percent pay raise and elasticity of .4.

[d]Measured for a group roughly equally divided between three groups.

the three groups. The results of a reenlistment bonus experiment[15] also support a relatively inelastic pay response among reservists at first term.

Estimates of career retention rates at 8 and 10 years of service made by Commission analysts were much closer to the mark. For instance, the Commission gave estimates of 49.5 for Army reservists and 58.2 for National Guardsmen with 8 years of service. Estimates of retention of individuals completing 7 and 8 years of service in 1978 for both groups were 57 percent.

The Reserve pay elasticity is also much lower than similar elasticities measured for civilian moonlighting. In 1973 Rostker and Shishko[16] developed a theory of moonlighting, or secondary labor market participation, to explain the behavior of Air Force reservists. This theory portrayed the decision to moonlight as a trade-off between additional leisure time and income. The theory identified several important economic variables in a civilian moonlighting decision, including primary job hourly wages, primary job hours, and secondary job hourly wages. Empirical estimation on civilian moonlighting decisions confirmed the direction and importance of these variables. Moonlighting was less frequent among those having primary jobs with high hourly wages and longer hours. The most important finding for reserve compensation policy was that a 10 percent increase in secondary wages would result

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[15] David W. Grissmer, Zahava D. Doering, and Jane Sachar, The Design, Administration, and Evaluation of the 1978 Selected Reserve Reenlistment Bonus Test, R-2865-MRAL, The Rand Corporation, July 1982.

[16] Bernard Rostker and Robert Shishko, "The Economics of Multiple Job Holding," American Economic Review, Volume 66, No. 3, June, 1976, adapted from their Air Reserve Personnel Study: Volume II. The Air Reserve Forces and the Economics of Secondary Labor Market Participation, R-1254-PR, The Rand Corporation, August 1973.

in a 9 percent increase in the probability of moonlighting. If civilian moonlighting decisions and reserve participation decisions are analogous, then the reserve pay elasticities assumed by the Gates Commission would seem reasonable.

However, participation in the reserve has several features different from civilian moonlighting jobs which could make the secondary wage moonlighting elasticity and military reserve elasticity quite different. First, work hours are quite different for the typical moonlighting job and the reserve job. The amount of time that a reservist works averages only 4 hours per week, whereas the median for a civilian moonlighter is 13 hours.[17] Since average hourly civilian moonlighting pay and reserve pay are roughly equal, annual income from reserve participation is much lower than that from typical moonlighting jobs. This may imply that taste plays a larger role in reserve decisions than civilian moonlighting decisions.

Second, reservists must legally commit themselves for up to 6 years of service, and they can be mobilized during periods of threat to the national security or, in the case of guardsmen, to assist in peacetime civil emergencies. This term of commitment creates certain opportunity costs for reservists not present in civilian moonlighting jobs.

Third, reservists receive health, education, life insurance, tax, and pension benefits. For certain reservists, these benefits--all of which are usually not present for civilian moonlighting jobs--substantially boost reserve income. Reservists can, for instance, qualify for a pension after 20 years of satisfactory service. Although

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[17] Multiple Jobholders in May 1978, Special Labor Force Report 221, Washington, D.C.: U.S. Department of Labor, Bureau of Labor Statistics, reprinted from Monthly Labor Review, February 1979.

the pension is payable at the age of 60, calculations show that for reasonable assumptions as to real interest rates and pay growth, the equivalent of over 50 percent of each reservist's pay would have to be set aside were the reserve pension system funded on an actuarially sound basis.[18] These types of benefits are usually not available in civilian moonlighting jobs, and their presence would tend to lower responsiveness to direct changes in base pay.

Fourth, unlike most civilian moonlighting jobs, reserve duty time and primary job time can directly conflict. The work schedule for reservists calls for a two week period of full time work during annual training requiring absence from civilian work. While employers are legally bound to provide military leave, evidence suggests that the requirement for annual training often creates conflict between the reservist and employer. Also, reservists must have full-time military training to qualify for reserve entrance and certain types of promotion. On entry, reservists must undergo at least 12 weeks of full-time training, and special training is often required for advancement. Again, for reservists employed full time, training interrupts the primary job. Consequently, individual decisions to join the reserve cannot be considered independently of the type of primary job held and the attitude of the employer toward reserve participation.

Finally, the reserve job offers certain nonpecuniary rewards. The work itself often offers opportunities for training and the use of unique equipment. The social environment seems to create a sense of camaraderie and cohesion. These rewards may play an important role in reserve participation and lead to a model of participation much closer

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[18] Richard V. L. Cooper, "Accrual Accounting for Reserve Retirement" (unpublished research), The Rand Corporation, January 1978.

to that of a voluntary association than that of a secondary job. In this view, reserve participation primarily satisfies leisure or avocational needs, and the income potential is secondary. If these needs are the prime reason for participation, one would expect small pay elasticities. So, one explanation of the relatively weak response to increases to current compensation is that reserve participation decisions might be dominated by taste variables or nonmonetary rewards more associated with decisions to join voluntary groups (i.e., volunteer fire departments).[19] Another explanation is that the effects of reserve retirement benefits which require 20 years of participation might exert strong influence even for first term decisions.

The higher realized retention rates due to an AVF played a key role in the strength reversal during the AVF period. Predicted higher retention rates would not occur until FY79--the first year volunteer cohorts with six year terms would reach first term retention decisions (see Table 9). The increase in retention is one reason selected reserve strength trends were reversed in FY79, and the higher volunteer level of retention would cumulatively add strength for several years. Since Gates Commission analysis was for equilibrium forces having higher retention over a long period of time, their prediction of strength levels implicitly assumed a transition period of lower strength. This transition period would last as long as draft motivated youth were in the force (1978) and for a period of time while higher retention rates

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[19] It is interesting to note that measurements of the effects of primary civilian job wage and working hours on reserve reenlistment produced highly statistically significant effects with expected signs, but the elasticities (.21 for wages and .26 for hours) were much smaller than measures for civilian moonlighters. See Burke K. Burright, David W. Grissmer, and Zahava D. Doering, A Model of Reenlistment Decisions of Army National Guardsmen, R-2866-MRAL, The Rand Corporation, October 1982.

Table 9

FIRST TERM[a] CONTINUATION RATES
FOR ENLISTED SELECTED RESERVISTS

Fiscal Year	Component						
	ARNG	USAR	USNR	USMCR	USAFR	ANG	DoD
1976	62.1	61.0	66.2	60.3	59.4	68.7	64.0
1977	63.9	61.4	53.4	64.9	64.9	74.8	65.0
1978	65.5	55.7	54.3	72.1	69.6	71.3	66.3
1979	74.5	66.2	60.0	74.3	77.2	80.4	72.6
1980	78.9	70.7	58.3	76.2	78.4	82.4	75.7
1981	78.9	70.6	60.2	74.1	76.7	80.4	75.5
1982	78.6	69.7	61.3	76.6	75.8	81.5	75.4

[a]Denominator is personnel in base year with less than 6 years of service.

would cumulatively add to overall strength. Thus, comparison of recent 1983 strength levels to Gates Commission prediction is best.

Unfortunately, between FY73 and FY79, non-prior service accession cohorts were small and of questionable quality. Attrition rates among lower quality Army reserve accessions is particularly high (i.e., in the FY75 cohort only 1 in 5 accessions finished their 6 year term).[20] Thus, the smaller size of accession cohorts and high attrition tended to hold potential strength gains from higher retention rates down.

[20] See D. W. Grissmer and S. N. Kirby, Attrition During Training in the Army Reserve and National Guard, The Rand Corporation, forthcoming.

Reserve Accessions

The level of non-prior service reserve accessions fell dramatically between 1970 and 1976 from 149,000 to 36,000 (see Table 6). The pay raise given in FY72 was not sufficient to prevent this drastic decline. In the absence of NPS personnel, the reserves increased prior service recruiting--and were quite successful (see Table 6). Prior service recruiting levels went from 28,000 in FY70 to 115 in FY74. Utilization of increased prior service personnel saved training costs of between $5,000-$10,000 per individual incurred by non-prior service accessions. However, overall accession levels between 1973 and 1979 were insufficient to maintain desired strength.

It was not until the late 1970s that several actions were taken to boost NPS recruiting for the reserves. Enlistment bonus payments or educational tuition grants of $1500 were offered beginning in FY79. Army Reserve recruiting responsibility was given to the active Army recruiting command. Additional recruiting and advertising resources were targeted and unit manning was given priority. Reservists themselves can be effective recruiters since they reside in their home community, but need to be satisfied themselves before recruiting for their units. Several measures aimed at increased readiness and unit morale probably aided this process. These included additional full-time support personnel for administration and training and efforts at improved training and closer links to active units. These actions together with higher unemployment and a more favorable environment toward military service boosted total reserve NPS enlistment totals to 104,000 and 106,000 in FY81 and FY82 respectively.

The Gates Commission predicted levels of non-prior service accession for the Army components of 83,000 for FY77-79 compared to actual levels of 55.5, 53.0 and 64.0 in FY77-79 respectively (see Table 6). A major reason for the overestimate is the assumed pay elasticity of .8 compared to current estimates of around .1 to .3.[21] There also appears to have been overestimates of the percentage of reservists in 1968 who were volunteer accessions as reported from survey data. It should however be pointed out that volunteer non-prior service accessions did reach levels of 80,000 and 86,400 in FY81 and FY82, respectively.

The level of long term equilibrium prior service accessions predicted by the Gates Commission for the Army components was around 15,000. This number took into account the smaller size of the active force and the reduced level of losses from a volunteer active force. Levels of prior service accession from FY77 to FY82 have been between 75,000 and 101,000 (see Table 6). One reason the Gates Commission estimate was so low is that the historical data used to estimate these levels were demand constrained. Given the ready availability of high quality non-prior service personnel, the reserves probably never accepted the level of prior service personnel willing to join.

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[21] Current measures are more consistent with small elasticities, although generally have very weak or no statistical significance, or occasionally wrong signs. See: Robert Kelly, "The Supply of Volunteers to the Selected Reserve" United States Military Academy: Department of Social Sciences, May 1979, (mimeograph); William McNaught, Projecting Future Accessions to the Selected Reserve Components, N-1563-MRAL, The Rand Corporation, August 1980; and William McNaught, The Supply of Enlistees to the Selected Reserves, N-1562-MRAL, The Rand Corporation, July 1981.

How is it that the Commission's estimates on the overall strength levels sustainable under an AVF of 900,000 to 1,000,000 are fairly accurate, while each of the individual components--retention, NPS accessions, PS accessions, pay elasticities--going into the calculation are inaccurate often by factors of 2 to 6. Fortunately the errors tended to be in compensating directions. Low PS accession levels were partially offset by high NPS accession levels and low first term retention rates were offset by optimistic assumptions concerning attrition--i.e., more of a cohort would reach first term. In the end, the fact that elasticities were not estimated correctly was relatively unimportant and was largely overshadowed by misestimates of base enlistment, reenlistment, and attrition rates caused primarily by the lack of good data and the highly artificial reserve manpower environment due to the draft and war.

SELECTED RESERVE STRENGTH TRENDS

Selected Reserve strength which has grown at a compound annual rate of 5 percent since FY78 has not yet reached AVF equilibrium levels. Since FY81, there has been an increase in the accession levels of higher quality volunteers and the entrance NPS cohort sizes have tended to be larger. As these cohorts move through the force, both the large size and the documented lower level of attrition of the higher quality accessions will tend to maintain the growth trend in overall strength, which was initially fueled by higher first term retention. If the size and quality of accession cohorts can be sustained at the FY82 levels, strength growth would continue--in the absence of strength caps--at an annual rate of 4 percent over the next seven years. In reality, the

current strength levels could be maintained even in the face of accession levels significantly below FY81-82 levels.

These strength projections for the selected reserve enlisted force were made using a set of assumptions which attempted to balance the recent favorable recruiting and retention experience of the last two years with more unfavorable experience of FY78-80. Good estimates are not currently available which could attribute the change between these two periods to increases in unemployment, recruiting initiatives, increased pay and benefits and more fundamental changes in attitudes toward military enlistment. Thus the permanence of the recent recruiting experience is uncertain.

The projections were made by assuming continuation rates by years of service would be equal to average levels over the last 5 years. Thus these continuation rates reflect both high and low levels of unemployment, and periods before and after several recruiting, pay and benefit initiatives. Since satisfactory behavioral models do not exist for reserve accession levels, we have assumed four levels of accessions ranging from the FY82 level (244,000) to 70 percent of the FY82 level (171,000). The latter pessimistic level is well below average accession levels in the FY73-81 period (218.000) and even below the single worst recruiting year in 1973 (189,000). Thus this level leaves adequate room for declines due to unemployment and youth cohort and veteran pool decline. An additional assumption is that the mix of prior service and non-prior service accessions will stay at the FY82 level of 56.6 percent prior service. In FY82 prior service reserve accessions (138,000) were well below the historically high period of FY74-77 (157,000), while non-prior service accessions reached historically high levels (106,000).

It is likely that this mix could change somewhat to more prior service personnel over the period if non-prior service personnel decline. However, the projections are relatively insensitive to changes in this accession mix.

The results of the enlisted strength projections show that strength levels would grow by 5 percent between FY82 and FY90 even under the most pessimistic accession scenario (see Table 10), while a 37 percent growth would occur under the optimistic scenario of maintaining FY82 accession levels.

The reasons for the somewhat surprising growth trends can be more easily seen if the projected force is displayed by experience level (see Table 11). The dominant factor behind force growth in each scenario is a sharp increase in reservists with greater than 10 years of active and reserve experience. Under the pessimistic scenario this group increased

Table 10

PROJECTIONS OF SELECTED RESERVE ENLISTED STRENGTH

Accession Levels	Fiscal Year								
	82 (Actual)	83	84	85	86	87	88	89	90
		Projected Strength (000)							
FY82	827	892	946	990	1026	1058	1086	1111	1134
.9 FY82	827	871	907	937	963	985	1007	1026	1044
.8 FY82	827	848	868	884	899	913	927	941	955
.7 FY82	827	826	829	832	836	841	848	856	865

by 49 percent, while under the optimistic scenario the increase is 75 percent. This rapid growth in the senior group is attributable to at least three factors.

The first is the predicted higher retention rates during the AVF era. The doubling of first term retention rates created a bow wave of additional personnel moving toward the senior career force. Since this effect occurred around FY78 for personnel with 6 years of service who were making first term reenlistment decisions, this bow wave will move into the senior group beginning in 1982 and beyond creating very large groups of senior careerists. It is thus a legacy of the AVF decision.

The second factor leading to increased senior reservists is the very high percentage of prior service personnel taken in during the poor NPS recruiting years of FY72-77. Prior service personnel start with

Table 11

COMPARISON OF EXPERIENCE MIX OF ENLISTED SELECTED RESERVISTS

Years of Service	1982 (Actual)	1990 .7 FY82	1990 .8 FY82	1990 .9 FY82	1990 FY82
		Projections			
0-5	379	297	340	382	424
6-10	208	209	236	263	290
10+	240	358	379	399	420
Total	827	865	955	1044	1134

more years of experience--typically 3 or 4--and this bulge in prior service personnel helps to boost senior careerist strength in the early projection years.

The third factor is the increased retention due to reenlistment bonus payments initiated in 1978. These reenlistment bonus payments were given only if reservists chose three or six year terms of reenlistment. An evaluation of these experimentally designed bonus payments[22] showed that long term retention increased by 25 percent due to the bonus. This long term retention increase occurred primarily due to the presence of longer terms of service. Since this program is continuing it has boosted first term retention from FY78 until present, creating yet higher levels of enlisted personnel heading for the senior career force.

The growth in the senior career force does not come at the expense of the less experienced groups for the two more optimistic scenarios. However, for the two more pessimistic scenarios the size of the 0-5 YOS group declines. This decline reflects the fact that NPS accession levels are not high enough to sustain the size of this group. Although strength could be maintained even if accession levels drop to 70 percent of FY82 levels, this level of decline would probably leave a force with an unbalanced experience mix. It would leave little flexibility to cut back on the swelling career force in order to leave room for more junior personnel.

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[22] See David W. Grissmer and John R. Hiller, Followup of Participants in the 1978 Selected Reserve Reenlistment Bonus Test, N-1880-MRAL, The Rand Corporation, February 1983.

Whether the FY82 level of accessions can continue to be recruited depends on the explanation for the increase between FY74 and FY83. Possible explanations for this increase range from changes in unemployment to changes in the recruiting procedures (including increased resources, management attention, shifting the responsibility for recruiting to the Active Army Recruiting Command, and initiation of enlistment bonus and educational grant programs in FY79). Forecasting reserve accession levels is beset with a great deal of uncertainty until ongoing research is able to sort out the various factors affecting enlistments and make some determination regarding their possible magnitude and direction of effect. Still, using data and research that are at best extremely sketchy, we can establish some reasonable bounds for enlistment levels over the next five years.

It is certain that over the next seven years, the pools from which both the non-prior and prior service reservists are drawn will decline. First, the number of 17-21 year olds will decline between FY83-FY90 by 12 percent. Second, separations from the active force will continue to decline due to smaller force sizes and increased retention (see Table 12).

As the economy recovers, the unemployment rate will decline. The relationship between unemployment and accessions to the Reserves is difficult to characterize in an unambiguous fashion because there appear to be countervailing effects. Among the non-prior service pool, the Reserve job tends to be particularly attractive for the unemployed (recall that the Reserve job offers full-time employment during the initial active duty training) and for those civilians with a propensity

Table 12

ACTIVE DUTY ENLISTED SEPARATIONS
(000)

	Army	Navy	Marine Corps	Air Force	DoD
FY 71	492	168	93	137	890
FY 72	469	140	69	122	800
FY 73	226	143	52	131	546
FY 74	204	118	56	119	497
FY 75	209	121	54	100	484
FY 76	193	115	62	96	466
FY 77	175	109	47	84	415
FY 78	146	88	43	71	348
FY 79	156	92	48	83	378
FY 80	154	95	43	82	373
FY 81	132	96	42	74	344

to moonlight. A decrease in unemployment reduces the size of the unemployed pool; in addition, it offers increased job opportunities both full-time and part-time, thus reducing non-prior service accession levels. There is an additional factor that tends to reinforce this effect. In times of high unemployment, the Active Force tends to select higher quality recruits; the "overflow," as it were, consisting of persons with a marked taste for the military, tends to be a rich recruiting ground for the Reserves. During periods of declining unemployment, the Active Force draws down the eligible pool with strong taste for military service, thus coming into direct competition with the Reserves.

The effect of declining unemployment is more difficult to predict for prior service personnel. On the one hand, we have much the same

effect described above: increased civilian opportunities would reduce the attractiveness of the Reserves and reduce enlistments. Research has shown that the propensity for reserve service depends on primary wage levels and primary job hours, both of which tend to increase as unemployment declines. On the other hand, it has been well documented that the pool of active force veterans increases as unemployment declines because of lower retention in the active force. These individuals are prime candidates for reserve enlistment, although there is some evidence to suggest that there are frequently long delays between active force separation and reserve enlistment. Perhaps the best way of characterizing the effect of unemployment on reserve accessions is to talk in terms of the short-run and the long-run. In the short-run, declining unemployment will cause reserve accessions to decline. In the long-run, this effect may be counteracted to some unknown degree by the increase in prior service accessions due to the increased eligible pool.

Measurements of the effects of unemployment have tended to vary considerably. Non-prior service elasticities range from .2 to .8, and prior service elasticities range from .2 to .5.[23] With reduction in unemployment from 10.8 to 8.0, declines in accession of 6-10 percent might be expected.

The reserves initiated enlistment bonus payments or educational incentives of $1500 in FY79. The incentive program was limited to certain units and skills based on deployment time and manpower shortages. For a typical enlistee over a six year term the amount would

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[23] See William McNaught, Projecting Future Accessions to the Selected Reserve Components, N-1563-MRAL, The Rand Corporation, August 1980; and William McNaught, The Supply of Enlistees to the Selected Reserves, N-1562-MRAL, The Rand Corporation, July 1981.

add roughly 15-20 percent to discounted base pay levels. On the basis of coverage and current estimates of elasticities, the programs probably have added 5 percent or less to enlistment totals.

The effects of added recruiting resources for reserve forces and changes in organization and recruiting emphasis are harder to estimate. This is partly due to the different ways each component organizes and performs the recruiting function, and partly that reservists themselves can make effective recruiters in their home community. The National Guard components have their own recruiting organizations in each state, and the service reserve components can recruit through the active recruiting commands of their own organizations. Reserve recruiting can thus be affected by active recruiting goals and priorities. Both the presence of reservists themselves in the home community as potential recruiters and the joint active/reserve recruiting organization make it difficult to estimate at any time the resources being devoted to reserve recruiting. However, it is probably the case that a major cause of the increase in NPS recruiting levels from 46,000 in FY74 to 106,000 in FY82 has been the development of an effective recruiting organization which includes reservists themselves, added resources to recruiting and advertising and assignment of a higher priority to reserve recruiting.

The portion of added accessions due to recruiting, enlistment incentives and changes in attitudes toward military service should remain, while those due to unemployment and effects due to the decline in youth cohort or veteran pool will tend to change enlistment levels. For the purposes of the projections, we have assumed that enlistment levels could remain as high as FY82 levels and decline to 70 percent of that level. These estimates would seem to bound possible declines in the next several years.

Of course, the optimistic strength projections raise issues concerning the desirable experience mix for the reserves. A more senior force will cost more money but will offer higher levels of individual productivity. It will mean higher budgetary costs for present compensation and future retirement. For many types of units the substitution process of more senior people for more junior people may not be efficient. The larger number of senior reservists will also mean markedly reduced promotion opportunities--which should have a moderating influence on career force growth. If it appears desirable to moderate this career force growth, it will not be easily done. Retention rates after 10 years of service are fairly insensitive to current compensation and promotion control or direct bars to reenlistment may be necessary. This of course would raise issues of equity and difficult choices among personnel with similar records. Severance pay would be another alternative for encouraging separation. However, before these issues need to be faced, a more important issue of reserve force size needs to be decided. The growth in career force opens the alternative to have larger reserve force sizes. Essentially the expanded career force would already be in place and accession levels could be raised to achieve a balanced expansion. This long term decision needs resolution before manpower policies addressed toward experience mix issues can be implemented.

Reserve/Active Costs

The potential for growth in the selected reserve force and the rapid shift to a more senior force raises many issues which will dominate reserve manpower policy discussions over the next seven years.

These issues are the appropriate size of selected reserve forces, the most efficient experience mix and the appropriate level of pay and benefits. While these questions are certainly not new, the results of the projections place them in a somewhat different perspective.

The current budget deficits together with the future obligations connected with the force modernization program are forcing a review of the appropriate levels of reserve and active forces. One area of suggested saving is to increase the size of reserve forces, while maintaining the size of active forces. While the above projections suggest that reserve force growth is feasible, the questions of how much saving is achieved by this substitution and the impact on readiness remain. We will not address here the tougher question of readiness, but will offer some preliminary thoughts on the question of savings.

Savings estimates resulting from placing military units in the reserve rather than the active are made generally from studies which compare current peacetime costs for existing similar units in the active and reserve. These estimates generally show that the saving achieved is a strong function of the type of unit and required readiness or activity level. Units where the capital/labor mix is high and where readiness demands high activity levels--more typical of Air Force and Navy flight units--show savings of roughly 25-33 percent for reserve units, whereas more labor intensive units--typical of Army infantry units--show savings of as much as 70 percent. The savings flow directly from reduced personnel costs of reserve units and somewhat lower activity levels--perhaps attributable either to the lower activity required to sustain skills of more experienced reserve personnel or to lower readiness levels. Part of the savings also arises because reserve forces depend

partially on prior service personnel and have reduced initial training costs. The fact that these savings are not higher surprises some people who focus on the ratio of annual hours for reservists who typically are paid for around 300 annual hours while active personnel are paid for 2100. Overlooked in this simple comparison are several factors which tend to narrow considerably the cost differences.

First is the fact that labor costs for capital intensive units can be less than half of annual O&M costs. The nonlabor costs for similar activity levels of active and reserve units tend to be similar thus making cost savings in this category depend on slightly lower activity levels of reserve units. Second, the simple comparisons overlook the large number of full-time civilian personnel associated with reserve units who are needed to service and maintain equipment and perform administrative and training functions. In the Selected Reserve Air components full-time technicians make up about 17 percent of personnel, while in Army components the ratio is about 4 percent. More full-time personnel are needed where activity levels are high and capital equipment accounts for a large part of unit costs. Third, selected reservists tend to have higher average pay levels from their greater experience and the hourly rate of pay for drills is twice hourly pay for active personnel. Average hourly wages for reservists are thus higher than for active personnel. These factors tend to narrow the reserve/active cost differences made from simple perceptions of reservists as part-time and actives as full-time.

However, there are additional complications in making reserve/active cost comparisons which could significantly affect even the more detailed unit comparisons made on the basis of peacetime O&M

cost. These estimates leave out two important factors associated with reserve/active substitutions--the effect of different active and reserve force levels on overall pay levels and the costs of new military construction. Changing the size of either active or reserve force levels will exert upward or downward pressure on long term pay levels. Increasing the force size means higher accession levels and retention rates--adjustments typically made through pay or bonus levels. It is more difficult to predict when and how these pay changes would be made due to the Congressional decision process than it is to estimate the magnitude. However the size of these adjustments--since they could affect overall pay levels--needs to be included in the reserve/active calculus.

Small changes in the size of existing forces probably would not entail large construction costs since the tendency would be to collocate new units with existing units and utilize the existing capital base. However more modest changes in force sizes entail new construction--armories, airfields, training and equipment storage facilities. These costs would probably tend to be higher in the reserve forces since their geographical spread tends to lead to lower utilization and the need for more facilities. However, the extent to which existing facilities can be more intensively utilized is not known.

Initial work on active/reserve costing suggests that substitution leads to savings--although somewhat less than commonly perceived--and that additional factors need to be included to improve estimates. Underlying these savings is the question of the extent to which substitution is possible without sacrificing readiness. Reserve forces currently are a large portion of total forces and it is not clear that

large scale substitution is possible without reducing readiness. It also appears to be the case that equivalent readiness in active and reserve units can be most easily maintained where saving differences are smallest. Thus, more savings are generated in Army units than Air units, but more uncertainty currently exists in achieving equivalent active/reserve readiness in Army units than for Air units.

MOBILIZATION MANPOWER IN THE AVF ENVIRONMENT

Mobilization manpower is needed to bring active and reserve units to full wartime strength, provide replacements for losses, and assure that the essential non-unit manpower accounts are sufficient so that unit strengths are not reduced because of travel, illness, and training. Since the active and reserve force structures are undermanned in peacetime to save money, it is essential that a large number of personnel be available immediately upon mobilization to fill the units to their intended wartime strengths. It is necessary also to set up the replacement stream so that combat and other losses are replaced promptly without undue loss of unit combat effectiveness. Many of the people needed to meet these demands have to be trained in advance so that they can meet the time-urgent schedules for the mobilization and deployment of the units. Some of the people intended for later use primarily as replacements can be trained after the mobilization starts. So those are two general classes of mobilization manpower: pretrained individuals and post-trained individuals.

Post-trained individuals are provided by the Selective Service System to the Department of Defense. Under the current law, young men from 19 to 21 years of age will be drafted and sent to basic combat training and initial skill training for at least the three months

mandated by law. After that initial training period, they are available for assignment to units as fillers or replacements. The post-trained manpower system is in pretty good shape now, although it did not fare well in the early years of the AVF, despite the Gates Commission admonition to assure that an effective standby draft was in being.

Pretrained individuals, however, were overlooked by the Gates Commission and by almost everyone else until the late 1970s. Starting in 1978 intensive actions were taken to assure an adequate supply of pretrained individual manpower, and these efforts have been successful to an extent. However, problems persist, and this area must be rated as one of the still weak areas of the AVF.

One major reason why the problem was overlooked in the early AVF years is that all of the Services had on hand in 1973 large numbers of personnel assigned to their Individual Ready Reserve (IRR) pools. These large numbers created a false sense of security. Little attention or money was devoted to management and training of these people. For the most part, they were simply ignored. The word "pool" indicated the feeling about this group: that they were a vast resource from which the Services could fish to get their needed skills in time of need.

This sense of security evaporated in the mid-1970s when the IRR pools dried up. The new methods of computing wartime manpower requirements which were emerging in this same time frame gave some substance to the need for fillers and replacements upon mobilization. The new and large requirements were firmed up at the same time that the supply was shrinking, and it became obvious that the Services could not support a full mobilization because they did not have enough pretrained individual manpower to meet their own stated demands. Initially there

was a lot of confusion about the extent to which a draft could substitute for pretrained individuals. However it soon became clear that even the fastest draft could not meet demands for entry level skills in the first 3 or 4 months and for more advanced skills in the first 6-8 months. At this point serious attention finally was paid to the pretrained individual manpower problem.

Actions to Provide Pretrained Individual Manpower

Recognition that this was a pretrained manpower problem was essential to taking appropriate corrective action. As long as the problem was an "IRR shortfall," emphasis was placed only on efforts to increase the number of people in the IRR itself. The IRR shortfall approach led inevitably to proposals for various forms of a peacetime draft--for the IRR alone; for the Reserve components; and even a draft for the active component to provide people for the IRR. None of these proposals for a peacetime draft, however, were feasible in the AFV climate, and other solutions had to be found if the problem were to be solved.

The phrase "Pretrained Individual Manpower" and the concept for which it stands allowed a partial solution to this problem. It will provide a complete solution in time if followed to the logical conclusion.

The concept of pretrained individual manpower expanded the solution space to include sources other than the IRR. This converted a supply problem to a management problem. The critical step in the solution of this problem was to get people to understand that there are sufficient personnel with prior military training in the United States to meet the demands of a full mobilization. The real problem is that not all of

these pretrained individuals are available conveniently in the event of a mobilization. The table below shows the total universe of pretrained individual manpower arranged in order of availability.

Once this understanding was achieved, there were two obvious things that had to be done. The first was to get as many assets from each of the potential sources as possible. The second was to apply intensive management to these personnel sources to provide a satisfactory degree of assurance that the right people would get to the right jobs at the right time.

Actions that have been taken are as follows:

1. Policies have been adopted which would make significant numbers of active component personnel in the Individuals Accounts available as fillers and initial replacements immediately after mobilization. These policies include cessation or curtailment of schools for certain skills, cancellation of leave or delay en route, and acceleration of training courses.

Table 13

PRETRAINED INDIVIDUAL MANPOWER SOURCES

Source	Availability
Active Component Individuals	Partial Mobilization
Individual Mobilization Augmentees	Partial Mobilization
Retired Regular Personnel	Partial or Full Mobilization
Individual Ready Reservists	Full Mobilization
Standby Reservists	Total Mobilization
Retired Reservists	Total Mobilization
Veterans w/o Obligation	Not Available

2. The Individual Mobilization Augmentation (IMA) program has been extended from the Air Force, where it had been very successful, to all of the other Services. The advantage of these program is that it can supply a highly skilled person to a wartime augmentation job with minimum delay. IMAs are trained on specific jobs as well as specific skills, and they provide a highly reliable method of assuring immediate augmentation, although with relatively high peacetime training costs. The IMAs were all placed into the Selected Reserve so they would be available if desired as part of the 100,000 man callup in a partial mobilization prior to a declaration of national emergency or full mobilization.

3. Personnel management of IRR personnel has been improved. The Services realized that it was not good to have just a vast pool of trained people if they could not be used promptly when needed. One valuable program has been preassignment. Under this program, some IRR personnel are assigned in advance to the units or stations to which they will report upon M-Day. This saves time in the event and provides the preassigned IRR personnel with some morale enhancing identification with a wartime job. Another program has been increased refresher training in peacetime for IRR personnel. This has been very successful with officers, but less so with enlisted personnel. These and other programs to improve the management of the IRR have served to improve the training, readiness, and responsiveness of IRR personnel for active duty in a mobilization. However, this action has been implemented half-heartedly, and much more needs to be done.

4. The Standby Reserve has been recognized as a valuable source of trained personnel. An inventory of this source revealed that it did contain significant numbers of personnel with valuable skills. The Services have included the Standby Reserve into their mobilization assignment procedures, and are able now to make effective use of this source.

5. Retired personnel have been included in mobilization planning. Because of the early retirement ages of most officers and enlisted personnel, there are a substantial number of retirees who are still vigorous and possess skills and experience of value in a war. Retired personnel would be recalled to replace younger personnel, who in turn would be assigned to the fighting forces. Once this possibility was pointed out, the Services adopted the idea enthusiastically and created programs for recalling retired personnel for mobilization. These programs are very inexpensive, costing little more than some minor record-keeping, but they add several thousand people to the numbers available promptly upon mobilization. The law allows recall of retired regular personnel rather easily, and these have been brought into the mobilization system first. Actions are underway to incorporate the large number of retired reservists who also could be used. This action has been a very satisfactory one.

6. The effort to make use of veterans without military obligation, on the other hand, was a resounding failure. The idea was quite simple. The current military service obligation incurred upon enlistment is 6 years. Personnel with an obligation were already in the Selected Reserve or IRR. It was discovered that there were large number of

people with prior military service who had completed their obligation. Three ways to obtain the services of these Veterans in a mobilization were considered.

a. The most effective method was to recall these people involuntarily in time of war--draft them in effect--to meet the shortages which remained after all of the other sources of supply had been used. This method proved to be infeasible politically. The major policymakers in the Executive Branch and the Congress rejected the idea of making people who had served already go again into combat, particularly before people who had never served. Thus, a solution which appeared rational proved to be unworkable because of human considerations. It should be noted, however, that many officials who professed publicly to detest the idea of using veterans admitted privately that they would need and want the veterans in a "real" war.

b. The next approach was to create an "Emergency Reserve" which veterans could volunteer to join in peacetime, understanding they would be recalled in the event of mobilization. This method would be less reliable than a draft, but did not require any coercion. The Emergency Reserve would receive no peacetime pay or training but would receive refresher training immediately when mobilized. Preliminary surveys showed that there were sufficient veterans willing to do this to warrant going ahead with the program, but by this time the whole idea of using veterans--even volunteers--was considered to be political poison.

c. The least reliable approach was simply to give priority to veterans (called "prior service accessions" for this purpose) during the volunteering phase at the outbreak of war or declaration of mobilization. The Department of Defense intends to accept volunteers for service at the same time that the wartime draft is being established to deliver draftees. It is more efficient in the initial days of a mobilization to accept a prior service volunteer requiring only 2-3 weeks of refresher training before becoming a useful asset, than to accept a non-prior service volunteer requiring 12 weeks of training just to reach an entry level skill. This concept gained a degree of acceptance but never seemed to become entrenched firmly in manpower mobilization planning.

Despite these successful actions, there remains a shortage of pretrained individual manpower for a full mobilization. Each Service has a shortage; the Army has the most severe problem. Not only does the Army need more pretrained individuals, it has particular need for pretrained individuals with combat skills.

The Outlook for Pretrained Individual Manpower

While the problem of providing sufficient pretrained individual manpower has not been solved, there is no reason to attribute that failure entirely to the AVF. The problem also was not solved in the draft years, when there were large numbers of people but no appreciation for the problem and insufficient management of existing pretrained individual resources. The lower IRR strengths caused by the advent of

the AVF forced the DoD to pay attention to this problem and take actions that alleviated the problem to a great extent, but which did not provide for a complete solution.

The current situation is that the DoD has done about all that it can to use sources of pretrained individual manpower other than veterans and the IRR. The complete solution to the problem requires more actions to be taken in these two areas.

Veterans

DoD presently has no plans or programs to make effective use of veterans (prior service personnel) in the early days of a mobilization, either voluntarily or involuntarily. These plans and programs would have to be improvised at the outset of the mobilization, because it is evident that the veterans would be used to prevent military collapse from lack of replacements.

Some plans to make use of the veterans should be accomplished now, perhaps on a contingency basis. The idea of accepting--even encouraging--pretrained personnel to volunteer for wartime duty at the start of a mobilization should be reconsidered. Such an approach would be well in keeping with the AVF concept. It makes good sense also to consider recruiting some of these veterans in peacetime to join the IRR or a special reserve component established just for them. The Army is studying the possible use of veterans, and that is an encouraging sign.

The IRR

The IRR will have to be increased in strength and managed better to provide assurance that the combat skills needed by the Army and Marine Corps, and the technical skills needed by the other Services upon mobilization, are going to be available. While the other sources of

pretrained individual manpower are valuable and necessary, the IRR is the best source in terms of availability and trainability. However, IRR strength is not sufficient, and its enlisted members are not participating sufficiently in training.

Table 14 below shows IRR strength during the AVF years:

Table 14

INDIVIDUAL READY RESERVE STRENGTH
(Thousands)

Fiscal Year	Army	Navy	Marine Corps	Air Force	DoD
1972	1060	215	138	157	1571
1973	759	217	116	137	1229
1974	540	179	90	121	931
1975	363	122	58	87	631
1976	240	106	54	83	485
1977	160	106	45	63	375
1978	178	93	40	46	356
1979	206	86	59	44	396
1980	212	97	57	46	413
1981	224	99	52	44	419
1982	230	78	45	43	396

IRR strength dropped dramatically with the advent of the AVF. DoD IRR strength in FY1978, when it reached its low point, was less than 30 percent of strength in FY1973. Today, despite great efforts, IRR strength remains well below pre-AVF levels for every Service. Even more disturbing is that the strength continues to decline for the Navy, Marine Corps, and Air Force.

There are three ways to increase IRR strength: extend the military service obligation; provide financial incentives; and institute appropriate personnel policies.

The least expensive and most reliable way to increase IRR strength is to increase the length and coverage of the military service obligation (MSO). This, of course, is a form of involuntary service.

Each person joining a military service incurs an obligation to serve for a fixed period of time--currently 6 years. The person may serve this 6 year period in any combination of active and reserve duty. During the draft era, the 6 year MSO created the large strengths in the IRR. Draftees typically served 2 years or less on active duty, then finished up their MSO by serving 4 years in the IRR. (A few went to the Selected Reserve.) The large IRR of the pre-AVF years consisted primarily of these obligors. The AVF changed that. As initial active duty enlistments increased to 3 years and more people reenlisted for the active component, fewer people ended up in the IRR, and strength dropped.

It was recognized that increasing the MSO to 8 or even 10 years for new members would provide a larger IRR. However, the additional strengths would not pay off for 6 years, assuming present members were kept on the 6 year MSO. Moreover, the Services were concerned that a longer MSO would reduce active component non-prior service accessions. Obtaining approval for a longer MSO appeared to be a lengthy project, so immediate attention was given to closing loopholes in the existing MSO law. The 1973 MSO had a lot of loopholes: women were excepted; voluntary transfers to the Standby Reserve were permitted; and other minor exceptions were permitted. When these loopholes were closed, there was a surge in IRR strength which helped, but failed to provide sufficient IRR strength. In the meantime actions to increase the MSO

continued, and an 8 year MSO measure passed in the Congress this year. The new law gives the Secretary of Defense the authority to extend the MSO up to 8 years for new military personnel. When this is done, IRR strength will increase substantially in about 6 years.

Financial incentives to induce people to serve in the IRR consisted of an enlistment bonus and a continuation bonus. The enlistment bonus was for non-prior service persons who would receive initial training and serve their entire 6 years in the IRR. This direct enlistment program was not supported with great enthusiasm by the Army, and it did not prove to be an outstanding success with the prospective enlistees either. The value of an IRR person who had never served in an active or reserve unit was considered to be marginal at best. The continuation bonus was more effective. This was an inducement to get people leaving active duty or selected reserve duty without any remaining obligation to join the IRR for 3 more years. In effect, this is an IRR reenlistment bonus. The program was poorly supported with funds, and authority expired. It is scheduled to start up again in FY1984. There is every reason to believe that financial incentives which have proven effective for the active component and for the Selected Reserve will be just as effective for the IRR. However, the Services have not given this program the interest, analysis, or funds that the other programs had. If the Services want a larger IRR in the 6 year period before the MSO increase pays off, the effective use of financial incentives needs to be considered seriously.

Appropriate personnel policies will help increase IRR strength. Some of the policies still in effect in the Services, particularly in the field, originated in the pre-AVF era. At that time, when strength

was large, the philosophy was to make it easy to get out of the IRR. Training participation standards were set high, and personnel who did not meet these standards were discharged. As recently as November, 1983, people with required skills were being discharged routinely by personnel centers without regard for mobilization requirements. While many of these vestigial policies have been changed, it would be a good idea still to review IRR personnel management policies to assure that they are consistent with an era of shortage. That is, the policies should make it easy to get into the IRR, and hard to get out.

Training Participation

Another important action that can be taken to improve the IRR is to increase training participation. Since strength is insufficient, it is absolutely essential that each IRR member is ready and willing to report when ordered to active duty for a mobilization. The way to do this is to provide effective and interesting training. This is not easy. While it is hard to persuade young people to participate faithfully and enthusiastically in reserve unit training one weekend a month, it is much more difficult to get individual reservists to train at all.

IRR training is primarily a problem with junior officers and lower-ranking enlisted personnel. Senior officers and the NCOs are willing to participate in training; the pay is pretty good, and the senior people have more attachment to and understanding of their Services. Most of the IRR, however, consists of junior officers and low-ranking enlisted personnel, who really do not want very much to interrupt their civilian lives to perform military training, particularly if that training is poor. There is anecdotal evidence that some IRR training is indeed poor. IRR personnel assigned to train with active component units have

sometimes been used for work details. Individual IRR members sometimes arrive for training to find that their active component hosts are unprepared and unwilling to take the time to provide good training. Finding school quotas for IRR personnel remains a problem. While there certainly is some good training for IRR personnel, it is likely that overall it is not as good as it should or could be. Three things that could be done to improve IRR training are as follows:

1. Adopt new forms of IRR training which are convenient and attractive to the IRR members. A major concern for IRR members is conflict with civilian employment; training could be conducted on weekends to minimize this problem. Training time could be split up into small doses instead of requiring 2 weeks at a time. Weekend symposiums have been both effective and popular, when they are well organized, fast paced, and professional. More school quotas, more courses designed for IRR personnel, and more special offerings at training centers would improve IRR training and increase participation. The United States today is full of adult education courses, seminars, and conferences. There is no reason why some of these methods cannot be applied to IRR training.

2. Improve IRR training by putting more money and more people into it. IRR training has very low priority in the budget. However, if the mobilization manpower requirement is valid and a trained IRR is needed to meet the requirement, the money would be well spent.

3. Put high level command emphasis on IRR training. The DoD can perform magnificently when it tries. The military Services are expert at providing good training, when they try. If DoD and the Services decide to have outstanding training for the IRR, it will happen.

Impact of the Pretrained Individual Manpower Problem on the AVF

While the problem of insufficient pretrained individual manpower to support a full mobilization is not entirely a result of the AVF, it may well be the Achilles heel of the AVF. The persistence of the shortage of pretrained individual manpower is recognized as a serious problem among those who are responsible for planning for mobilization and deployment. There have been attempts in Congress and elsewhere to institute some form of peacetime conscription to solve the pretrained individual manpower problem, including an IRR draft. Pressure for these kinds of measures will grow if the problem cannot be solved in the AFV context.

It would be ironic if the mobilization manpower problem--not entirely caused by the advent of the AVF--were to bring about its demise.

Reporting Policy

There is a long-standing controversy about how many of the reservists actually would report when ordered to active duty upon mobilization. The real answer will not be known until the mobilization, but it is essential to estimate the show rate to provide enough extra people to take care of the "no-shows." In effect, the DoD needs to know how much overbooking to do so that the required numbers will be present. An old study had used show rates of 95 percent for the Selected Reserve; 70 percent for the IRR; and 50 percent for the Standby Reserve. These show rates were derived very loosely from a few previous mobilizations. It is certain they are invalid. Nevertheless, there were used as sacred numbers for many years and may still be engraved in stone.

The approach adopted by DoD to provide a better fix to this problem was to emphasize management actions to improve the likelihood that an individual reservist or retiree would report for duty. The idea was that an individual's propensity to report for duty could be increased by putting that individual into a group, reducing his fear of the unknown, and increasing his own confidence. Personnel in organized units tend to report because they want to stay with their group, but individual reservists not in units do not have that particular support mechanism, and so other management actions are necessary. This led to the adoption of more intensive and personalized management of IRR personnel, more IRR training, and preassignment of various types. It also led to actions to keep track of the reserve personnel more closely and eliminate in advance those who could not or would not be available in time of need.

Guard and Reserve units have no credibility if they have personnel who are too old, too fat, or too ill to serve effectively in wartime. It is common sense to screen the personnel of these units periodically to assure that all personnel can serve if ordered to active duty in a mobilization. It also makes sense to remove from the units in advance those personnel who will not be able to report with their units because of their civilian jobs. A person can be in only one place at one time. A reservist who also is a critical defense worker or an important Federal official cannot remain in that civilian job and also report to active duty. A choice must be made, and it must be made in advance. Once the mobilization starts, it is too late for members with job conflicts to attempt to get out of the reserve obligations. To allow this would be to upset the mobilization process, which already will be

confusing and difficult because of shortages caused by legitimate absences. The necessary policy, which has been adopted by the DoD, is that there will be no delays, deferments, or exemptions once the order to mobilize is issued, and that all Ready Reservists will report when ordered. Transferring personnel out of the Ready Reserve must be accomplished prior to mobilization and will stop upon mobilization. When this policy will not assure that everyone does report, it does assure that everyone is supposed to report.

To be successful, this hardline policy must have the overt support of high officials, because any highly visible flouting of the screening policy will cause it to lose credibility and be enforced laxly among the rank and file. Unfortunately, there appears to be poor support for this policy among some high ranking officials now in office, and the show rate of the reserves in a mobilization is bound to be lower as a result than it otherwise would have been.

SUMMARY

The unsolved problem of pretrained individual manpower has been characterized as the greatest failure of the AVF. While this is an accurate statement, it is not a complete diagnosis. There also was a problem with pretrained individual manpower during the draft years. While there were large numbers of people in the IRR then, they were not managed, trained, or available for immediate service, and it is unlikely that a rapid full mobilization could have been supported. The reduced strengths brought about by the end of the short term active duty periods have required the DoD to pay attention to the IRR, bring other sources of pretrained individuals into a state of availability, and devote some attention and money to the problem. In that sense, the advent of the

AVF has contributed positively to solving the problem. It appears also that actions already taken and underway will provide a satisfactory solution in the future, provided that some plans are made for the use of veterans as an interim measure, the IRR improves in strength and training, and that a hardline reporting policy is maintained.

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